

Important Advances in Clinical Medicine

Epitomes of Progress—Chest Diseases

The Scientific Board of the California Medical Association presents the following inventory of items of progress in Chest Diseases. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist the busy practitioner, student, research worker or scholar to stay abreast of these items of progress in Chest Diseases which have recently achieved a substantial degree of authoritative acceptance, whether in his own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Chest Diseases of the California Medical Association and the summaries were prepared under its direction.

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Fiberoptic Bronchoscopy

SINCE THE DEVELOPMENT of the flexible fiberoptic bronchoscope in the mid 1960's this instrument has rapidly become an important and useful tool in the diagnosis and treatment of pulmonary disorders.

The first clinical study reported passing the bronchofiberscope through a rigid bronchoscope or endotracheal tube. Subsequently the transnasal technique was described. Using the instrument through a rigid bronchoscope or endotracheal tube allows for easier removal and re-insertion of the bronchofiberscope. The transnasal method is performed under topical anesthesia with the seated patient. It adapts easily for bedside bronchoscopy and can be extended to patients with neck or mouth problems or to patients in whom the neck cannot be extended. This method has had very good patient acceptance without any increase in complication rate.

Several different bronchofiberscopes ranging in size from 3 to 6 mm in outside diameter are manufactured. All possess flexibility of the entire working length (usually about 55 cm), a remotely controllable tip and an aspiration channel (1 to 2 mm in diameter) which allows injection of anesthetic solution, aspiration of secretions or passage of

brush or forcep biopsy instruments. The bronchofiberscope is illuminated by a cold light source (halogen or xenon). Cameras—motion picture, still picture, or videotape—can be attached to the eyepiece to record observations.

The remotely controllable distal tip can be flexed and extended to allow easy manipulation into all segmental bronchi, including those of the upper lobes. From the segmental level one gains visual access to several subsegmental branchings peripherally. Diagnostic accuracy is enhanced by the extended visual capability to areas previously inaccessible with the rigid bronchoscope. This increased diagnostic capability is magnified still further by the fact that transbronchoscopic brush and forcep biopsy instruments can successfully obtain adequate tissue specimens from these areas. Segmental bronchial secretions or washings following lavage with saline solution or water can be collected in a suction trap for cytology or culture. Additionally bronchography of the bronchial tree beyond the visual range can be accomplished by injecting contrast material through a catheter inserted into the aspiration channel of the bronchofiberscope.

Although the therapeutic value of bronchoscopy has been recognized for many years, the hazards